

**UNION
CARBIDE**

"Contains NO CBI"

UNION CARBIDE CHEMICALS AND PLASTICS COMPANY INC. - I
HEALTH, SAFETY AND ENVIRONMENTAL AFFAIRS

92 SEP -1 AM 11:30
O/S DOCUMENT RECEIPT

92 SEP -1 PM 11:30

August 28, 1992

**CERTIFIED MAIL
RETURN RECEIPT REQUESTED**

8E HQ-92-12114

INIT

88920010352

(A)
Document Processing Center (TS-790)
Room L-100
Office of Toxic Substances
U.S. Environmental Protection Agency
401 M Street, SW
Washington, DC 20460

Attn: Section 8(e) Coordinator (CAP Agreement)

Re: CAP Agreement Identification No. 8ECAP-0110

Dear Sir or Madam:

Union Carbide Corporation ("Union Carbide") herewith submits the following report pursuant to the terms of the TSCA §8(e) Compliance Audit Program and Union Carbide's CAP Agreement dated August 14, 1991 (8ECAP-0110). This report describes acute toxicity studies (chicken and pigeon) with BPMC (2-sec-butylphenyl-N-methylcarbamate; CASRN 3766-81-2).

"Acute Oral LD₅₀ of BPMC Technical in Birds (chicken and pigeon)",
Pesticide-Research Laboratory (Calcutta, India), 1/1/80 (ref. date).

A complete summary of this report is attached.

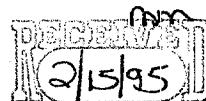
Previous TSCA Section 8(e) or "FYI" Submission(s) related to this substance are:

(None)

Previous PMN submissions related to this substance are: (None)

This information is submitted in light of EPA's current guidance. Union Carbide does not necessarily agree that this information reasonably supports the conclusion that the subject chemical presents a substantial risk of injury to health or the environment.

bpmc2



(2)

In the attached report the term "CONFIDENTIAL" may appear. This precautionary statement was for internal use at the time of issuance of the report. Confidentiality is hereby waived for purposes of the needs of the Agency in assessing health and safety information. The Agency is advised, however, that the publication rights to the contained information are the property of Union Carbide.

Yours truly,



William C. Kuryla, Ph.D.
Associate Director
Product Safety
(203/794-5230)

WCK/cr

Attachment (3 copies of cover letter, summary, and report)

SUMMARY

Observations

When male and female chicken and pigeon are exposed to BPMC Technical the birds show changes in behavioral responses especially anti-cholinesterase symptoms like loss of balance and salivation. Breathing trouble is also observed in all cases. In some of the birds additional toxic symptoms viz., lacrimation and exophthalmic conditions have also been observed (Tables I - IV). Mortality occurs within 24 hrs. for chicken. In contrast pigeons have been observed to die much earlier (Foot notes to Tables I - IV)

Percentage mortality are given in Tables IV - VIII. Calculated LD₅₀ values are given in log-probit graphs Figs. 1-4.

Fig 2. Log-Probit graph illustrating
calculated LD₅₀ values for
Male Chicken following
exposure to BPMC
Technical.

$$LD_{50} = 1000.0 \pm 124.67 \text{ mg/kg}$$

SUMMARY

2.

Fig. 2. Log Probit graph illustrating calculated LD₅₀ values for Female Chickens following exposure to BPMC Technical.

$$LD_{50} = 900.0 \pm 125.06 \text{ mg/kg}$$

Fig. 3. Log-Probit graph illustrating calculated LD₅₀ values for Male Pigeon following exposure to BPMC Technical

$$LD_{50} = 49.0 \pm 8.67 \text{ mg/kg}$$

Fig. 4. Log Probit graph illustrating calculated LD₅₀ values for Female Pigeon following exposure to BPMC Technical.

$$LD_{50} = 78.0 \pm 8.18 \text{ mg/kg}$$

Lem 424

Pesticide-Research Laboratory (E-II)

Our Ref.

Your Ref.

Date :

146/BB, Lake Gardens
Calcutta-700045
India
Phone :

REPORT ON UNION CARBIDE PRODUCT - BPNC TECHNICAL

Title of the project :

Acute Oral LD₅₀ of BPNC TECHNICAL in Birds (chicken and pigeon)

Initiator :

Dr. (Mrs) Renuka Sengupta

Place of work :

Pesticide-Research Laboratory, Calcutta

NOTE:
NO DATE ON REPORT.
FOR REF. PURPOSES
ONLY USE: 1/1/80

(Signature)

Dr. Mrs. Renuka Sengupta

Director of Research

Dr. Mrs. Renuka Sengupta
Dir. of Research
PESTICIDE RESEARCH LABORATORY
CALCUTTA.

Pesticide-Research Laboratory

Our Ref.

Your Ref.

Date :

14A/BB, Lake Gardens
Calcutta-700045
India
Phone :

REPORT ON THE ACUTE TOXICITY OF BPMC TECHNICAL IN BIRDS (CHICKEN AND PIGEON)

Introduction

BPMC (OSbac) or 2 - secondary - butyl phenyl - N - methyl carbamate has been found to be an effective pesticide against several pests of paddy and other vegetable, fruit and plantation crops. Reported mammalian toxicity is low and is considered comparatively safe to fishes (Union Carbide Technical Information sheet). It is essential to develop information on the spectrum of toxicity of the compound to other sensitive animal species like the birds under Indian conditions.

Objective of the present investigation

The present investigation is intended to assess the acute toxicity of BPMC TECHNICAL by single exposure to birds (chicken and pigeon).

Chemical Sample

BPMC TECHNICAL (Purity 97.5% of Union Carbide was used in the present investigation.

Materials and Methods

Experimental Birds :

Full vigour adult broiler chicken of both sexes, age 7-8 weeks were obtained from local poultry farm and kept under standard laboratory

(S.R.L.P.)

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BEST COPY AVAILABLE

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Pesticide-Research Laboratory

Our Ref.

Your Ref.

Date :

1/6/88, Lake Gardens
Calcutta-700045
India
Phone :

- 2 -

condition before using for experiments. Adult male and female pigeon were obtained from local bird supplier and were also kept under standard laboratory condition before using them for experiment. After exposure to insecticides the birds were given food and water ad libitum. The birds were kept under close observation for a period of 48 hrs and then for a further period of 19 days (= total period of observation 21 days) after which, survivors were subjected to post mortem examination for any gross pathological defects.

Pesticide administration schedule

All experimental birds were kept under starvation for 24 hrs. prior to insecticide administration. The birds were divided into groups of five. BPMC TECHNICAL was administrated by oral intubation of precalculated doses of :

- (1) Male chicken - 400.0, 600.0, 800.0, 1000.0, 1200.0,
1400.0, 1600.0, 2000.0 mg/kg
- (2) Female chicken - 200.0, 400.0, 600.0, 800.0, 1000.0, 1200.0,
1400.0, 2000.0 mg/kg
- (3) Male pigeon - 20.0, 30.0, 40.0, 50.0, 60.0, 80.0,
100.0, 120.0 mg/kg
- (4) Female pigeon - 40.0, 50.0, 60.0, 70.0, 80.0, 100.0,
120.0, 150.0 mg/kg

(2nd draft)

Dr. M. K. Gupta
Director of H. R. D.
PESTICIDE RESEARCH LABORATORY
CALCUTTA

contd.,,3

Pesticide-Research Laboratory

Our Ref.

Your Ref.

Date :

146/BB, Lake Gardens
Calcutta-700045
India
Phone :

- 3 -

Observations

When male and female chicken and pigeon are exposed to BPMC Technical the birds show changes in behavioral responses especially anti-cholinesterase symptoms like loss of balance and salivation. Breathing trouble is also observed in all cases. In some of the birds additional toxic symptoms viz., lacrimation and exophthalmic conditions have also been observed (Tables I - IV). Mortality occurs within 24 hrs. for chicken. In contrast pigeons have been observed to die much earlier (Foot notes to Tables I - IV)

Percentage mortality are given in Tables V - VIII. Calculated LD₅₀ values are given in log-probit graphs Figs. 1-4.

Chandrapal

Dr. Mira C. Chanda
Director
PESTICIDE RESEARCH LABORATORY
CALCUTTA

TABLE - I
DOSE AND TIME RELATED TOXIC MANIFESTATIONS IN MALE CHICKEN FOLLOWING
ACUTE ADMINISTRATION OF EPMG TECHNICAL

DOSE SCHEDULE mg/kg	BEHAVIORAL RESPONSES				BODY CHANGE QRS
	0- 24 hrs	1- 7 days	8- 14 days	15- 21 days	
Control	Normal	Normal	Normal	Normal	+ 300.0
Treatment	Symptoms *				
400.0	** (1) + ; (2) ± (3) 0	Birds apparently normal	Birds apparently normal	Normal	+ 210.0
600.0	** (1) ++ ; (2) ++ ; (3) +	Survivors apparently normal	Survivors normal	Normal	+ 165.0
800.0	** (1) ++ ; (2) ++ + ; (3) + + **	Survivors apparently normal	Survivors normal	Normal	+ 130.0
1000.0	** (1) ++ ; (2) + ++ ; (3) + +	Survivors apparently normal	Survivors normal	Normal	+ 75.0
1200.0	** (1) +++; (2) + + + ; (3) + +	Survivors apparently normal	Survivors normal	Normal	- 10.0
1400.0	** (1) +++; (2) + + + ; (3) + + +	Survivors apparently normal	Survivors normal	Normal	- 29.0
1600.0	** (1) +++; (2) + + + ; (3) + + +	Survivors apparently normal	Survivor normal	Normal	- 40.0
2000.0	** (1) +++; (2) + + + ; (3) + + +	-	-	-	-

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Dr. Ali A. Sengupta
Director of Research in
PESTICIDE RESEARCH LABORATORY
CALCUTTA

TABLE - II
 DOSE AND TIME RELATED TOXIC MANIFESTATIONS IN FEMALE CHICKEN FOLLOWING
 ACUTE ADMINISTRATION OF BP.C TECHNICAL

DOSE SCHEDULE mg/kg	BEHAVIORAL RESPONSES				BODY WT. CHANGES GMS.
	0- 24 hrs	1- 7 days	8- 14 days	15- 21 days	
Control	Normal	Normal	Normal	Normal	+ 280.0
Treatment	Symptoms*				
200.0	** (1) 0 ; (2) ± ; (3) 0	Birds apparently normal	Birds normal	Normal	+ 250.0
400.0	** (1) ± ; (2) + ; (3) ±	Survivors apparently normal	Survivors normal	Normal	+ 190.0
600.0	** (1) + ; (2) + ; (3) +	Survivors apparently normal	Survivors normal	Normal	+ 125.0
800.0	** (1) + + ; (2) + + ; (3) + +	Survivors apparently normal	Survivors normal	Normal	+ 85.0
1000.0	** (1) + + ; (2) + + ; (3) + +	Survivors apparently normal	Survivors normal	Normal	+ 50.0
1200.0	** (1) + + ; (2) + + ; (3) + +	Survivor apparently normal	Survivor normal	Normal	+ 5.0
1400.0	** (1) + + + ; (2) + + + ; (3) + +	Survivor apparently normal	Survivor normal	Normal	- 20.0
2000.0	** (1) + + + ; (2) + + + ; (3) + + +	-	-	-	-

Edited

D. Mrs. C.R. Senyurea
 Entomological Research
 PESTICIDE RESEARCH LABORATORY

TABLE - III

DOSE AND TIME RELATED TOXIC MANIFESTATIONS IN MALE PIGEON FOLLOWING
ACUTE ADMINISTRATION OF BPMC TECHNICAL

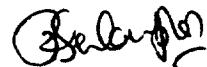
DOSE SCHEDULE mg/kg	BEHAVIORAL RESPONSES				BODY WT. CHANGE IN GRS.
	0- 24 hrs	1- 7 days	8- 14 days	15- 21 days	
control	Normal ^o	Normal	Normal	Normal	+ 45.0
treatment	Symptoms*				
20.0	** (1) + ; (2) ± ; (3) ±	Birds apparently normal	Birds normal	Normal	+ 38.0
30.0	** (1) + + ; (2) + ; (3) +	Survivors apparently normal	Survivors normal	Normal	+ 35.0
40.0	** (1) + + ; (2) + + ; (3) + +	Survivors apparently normal	Survivors normal	Normal	+ 22.0
50.0	** (1) + + ; (2) + + ; (3) + +	Survivors apparently normal	Survivors normal	Normal	+ 20.0
60.0	** (1) + + + ; (2) + + + ; (3) + +	Survivors apparently normal	Survivors normal	Normal	+ 15.0
80.0	** (1) + + + ; (2) + + + ; (3) + +	Survivor apparently normal	Survivor normal	Normal	+ 11.0
10.0	** (1) + + + ; (2) + + + ; (3) + + +	Survivor apparently normal	Survivor normal	Normal	+ 5.0
70.0	** (1) + + + ; (2) + + + ; (3) + + +	-	-	-	

(Signature)

Dr. Mrs. C.R. Sengupta
Director of Research
PERI-OZONE RESEARCH LABORATORY
CALCUTTA

DOSE AND TIME RELATED TOXIC MANIFESTATIONS IN FEMALE RODENTS, F. M. M.,
ACUTE ADMINISTRATION OF L-PIC (EIGHTH)

DOSE EDULOR g/kg	BEHAVIORAL manifest.				BODY WT. Grs. IN Grs.
	0- 24 hrs	1- 7 days	8- 14 days	15- 21 days	
ctrl treatment	Normal Symptoms*	Normal	Normal	Normal	+ 40.0
40.0	** (1) + ; (2) +; (3) +	Birds apparently normal	Birds normal	Normal	+ 38.0
50.0	** (1) + ; (2) + +; (3) +	Survivors apparently normal	Survivors normal	Normal	+ 35.0
.0	** (1) + + ; (2) + +; (3) +	Survivors apparently normal	Survivors normal	Normal	+ 27.0
.0	** (1) + + ; (2) + +; (3) + +	Survivors apparently normal	Survivors normal	Normal	+ 22.0
.0	** (1) + + + ; (2) + + +; (3) + +	Survivors apparently normal	Survivors normal	Normal	+ 15.0
.0	** (1) + + + ; (2) + + + + ; (3) + + +	Survivors apparently normal	Survivors normal	Normal	+ 11.0
.0	** (1) + + + ; (2) + + + ; (3) + + +	Survivor apparently normal	Survivor normal	Normal	+ 6.0
.0	** (1) + + + ; (2) + + + ; (3) + + +	-	-	-	-



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TABLE - V

EFFECT OF ACUTE ADMINISTRATION OF BPMC TECHNICAL IN
MALE CHICKEN

DOSE mg/kg	CHICKEN DOSED	CHICKEN DEAD	ADJ. NO. OF CHICKEN DEAD	ADJ. % OF MORTALITY	PROBIT
400.0	5	0	0	0	
600.0	5	1	1	20	4.16
800.0	5	2	2	40	4.75
1000.0	5	2	2	40	4.75
1200.0	5	3	3	60	5.25
1400.0	5	4	4	80	5.84
1600.0	5	4	4	80	5.84
2000.0	5	5	4 $\frac{3}{4}$	95	6.64

TABLE - VI

EFFECT OF ACUTE ADMINISTRATION OF BPMC TECHNICAL IN FEMALE CHICKEN

DOSE mg/kg	CHICKEN DOSED	CHICKEN DEAD	ADJ. NO. OF CHICKEN DEAD	ADJ. % OF MORTALITY	PROBIT
200.0	5	0	0	0	
400.0	5	1	1	20	4.16
600.0	5	2	2	40	4.75
800.0	5	3	3	60	5.25
1000.0	5	3	3	60	5.25
1200.0	5	4	4	80	5.84
1400.0	5	4	4	80	5.84
2000.0	5	5	4 $\frac{3}{4}$	95	6.64

Debby
Dr. Mrs. C.P. Sengupta
Director of Research
PESTICIDE TESTS
CALTA

TABLE - VII

EFFECT OF ACUTE ADMINISTRATION OF BPMC TECHNICAL IN MALE PIGEON

DOSE mg/kg	PIGEON DOSED	PIGEON DEAD	ADJ. NO. OF PIGEON DEAD	ADJ. % OF MORTALITY	PROBIT
20.0	5	0	1/4	5	3.35
30.0	5	1	1	20	4.16
40.0	5	2	2	40	4.75
50.0	5	2	2	40	4.75
60.0	5	3	3	60	5.25
80.0	5	4	4	80	5.84
100.0	5	4	4	80	5.84
120.0	5	5 $\frac{3}{4}$	4 $\frac{3}{4}$	95	6.64

TABLE - VIII

EFFECT OF ACUTE ADMINISTRATION OF BPMC TECHNICAL IN FEMALE PIGEON

DOSE mg/kg	PIGEON DOSED	PIGEON DEAD	ADJ. NO. OF PIGEON DEAD	ADJ. % OF MORTALITY	PROBIT
40.0	5	0	1/4	5	3.35
50.0	5	1	1	20	4.16
60.0	5	2	2	40	4.75
70.0	5	2	2	40	4.75
80.0	5	3	3	60	5.25
100.0	5	3	3	60	5.25
120.0	5	4	4	80	5.84
150.0	5	5	4 $\frac{3}{4}$	95	6.64

(Signature)

Dr. Mrs. K. Sengupta
 Director of Research
 PESTICIDE RESEARCH LABORATORY
 CALCUTTA

Foot Note for Table - III

Symptoms *

(1) Respiration ; (2) Balance ; (3) Salivation

**

Data for affected pigeon

30.0	-	Death occurs between	2 - 4 hrs.
40.0	-	Death occurs between	2 - 4 hrs.
50.0	-	Death occurs between	1 - 4 hrs.
60.0	-	Death occurs between	1 - 2 hrs.
80.0	-	Death occurs between	30 mins - 1 hr.
100.0	-	Death occurs between	15 mins - 1 hr.
120.0	-	Death occurs between	15 - 30 mins.

Foot Note for Table IV

Symptoms *

(1) Respiration ; (2) Balance ; (3) Salivation

**

Data for affected pigeon

50.0	-	Death occurs between	2 - 4 hrs.
60.0	-	Death occurs between	1 - 2 hrs.
70.0	-	Death occurs between	30 mins - 2 hrs.
80.0	-	Death occurs between	30 mins - 1 hr.
100.0	-	Death occurs between	30 mins - 1 hr.
120.0	-	Death occurs between	15 mins - 1 hr.
150.0	-	Death occurs between	15 - 30 mins.

Debony

Dr. M. R. Sengupta
Director of Research
PESTICIDE RESEARCH LABORATORY
CALCUTTA

Foot Note for Table - I

Symptoms *

(1) Respiration ; (2) Balance ; (3) Salivation

**

Data for affected chicken

600.0	-	Death occurs between	4 - 24 hrs.
800.0	-	Death occurs between	4 - 24 hrs.
1000.0	-	Death occurs between	2 - 4 hrs.
1200.0	-	Death occurs between	1 - 4 hrs.
1400.0	-	Death occurs between	1 - 4 hrs.
1600.0	-	Death occurs between	1 - 2 hrs.
2000.0	-	Death occurs between	30 mins. - 2 hrs.

Foot Note for Table - II

Symptoms *

(1) Respiration ; (2) Balance ; (3) Salivation

**

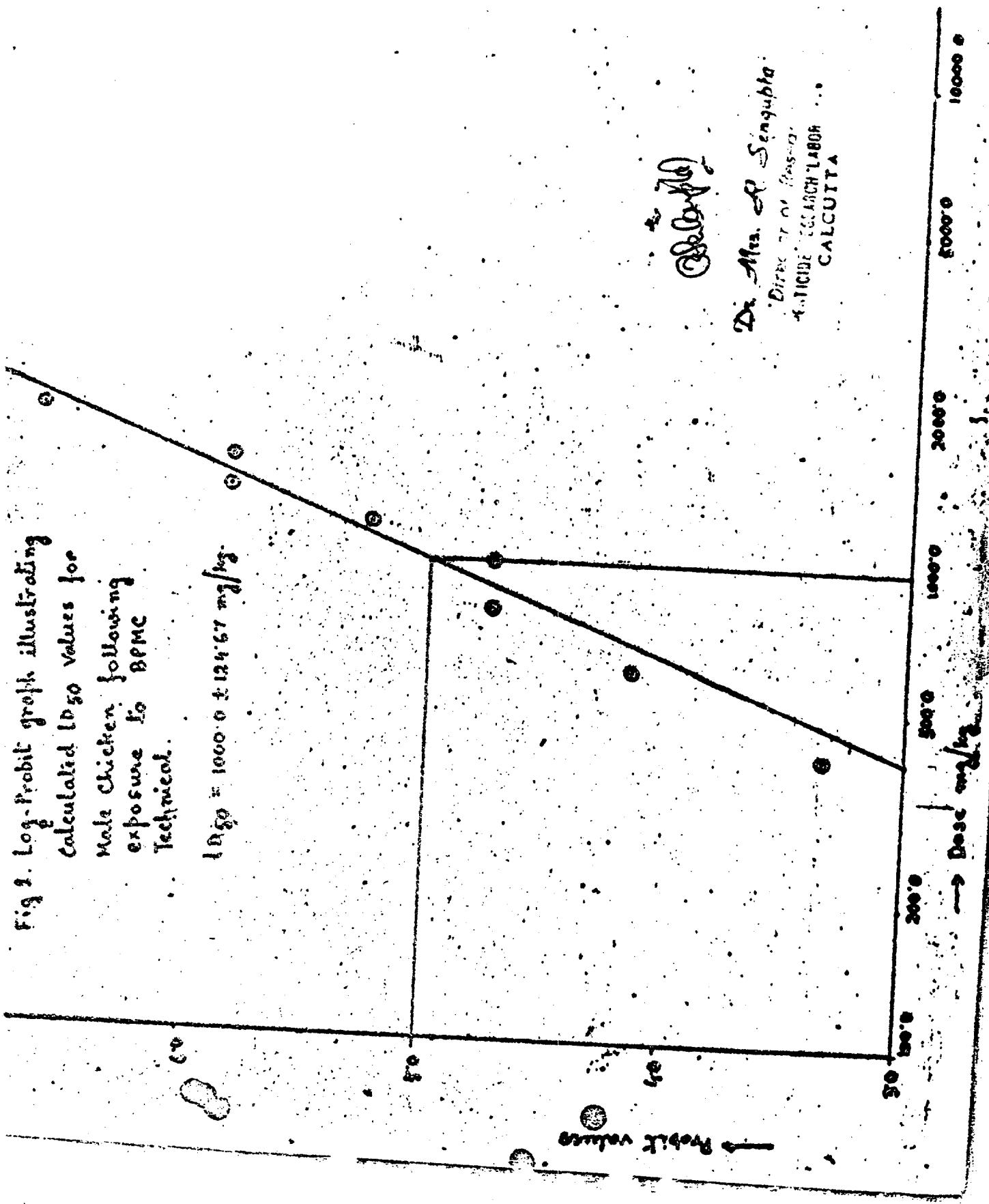
Data for affected chicken

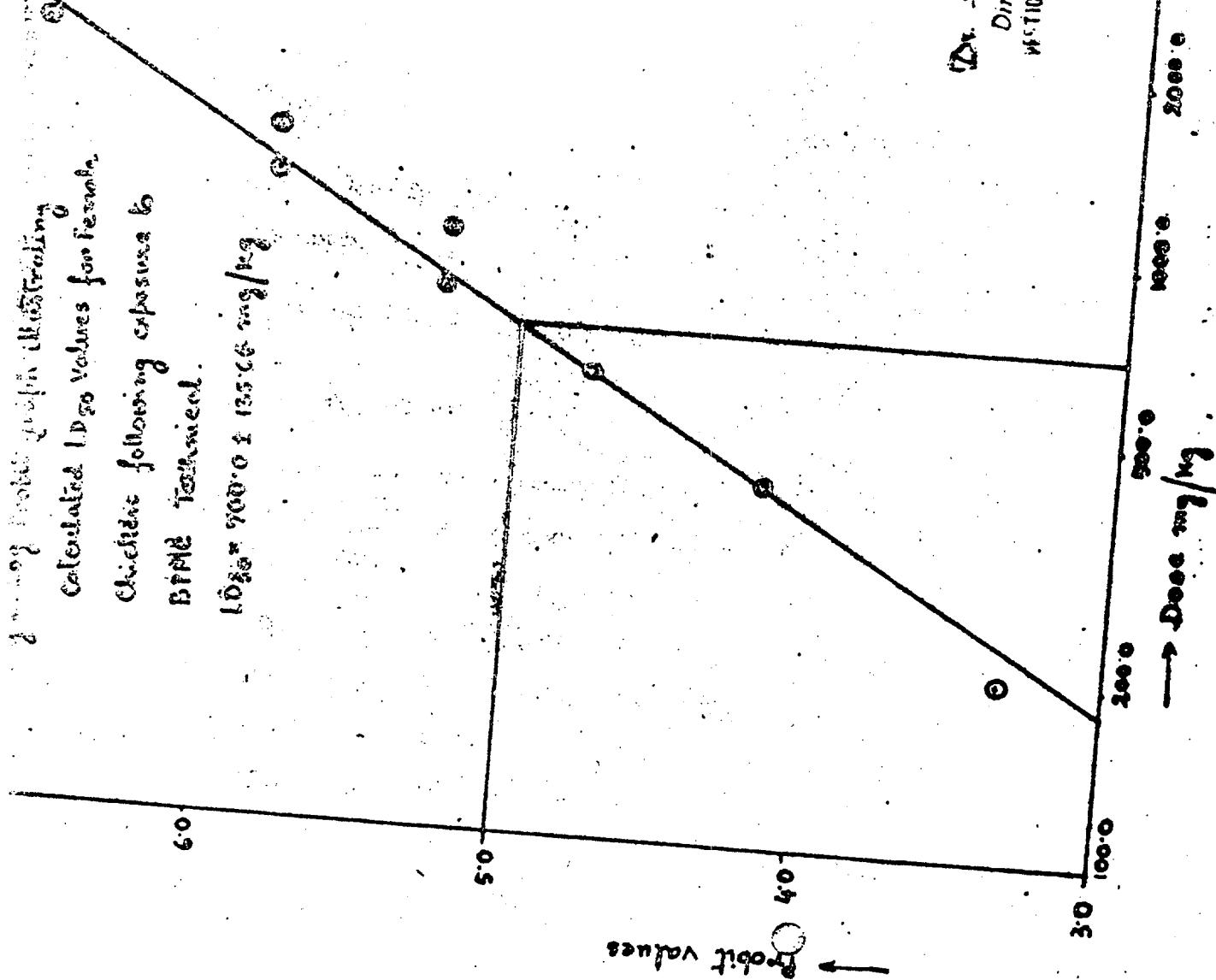
400.0	-	Death occurs between	4 - 24 hrs.
600.0	-	Death occurs between	4 - 24 hrs.
800.0	-	Death occurs between	2 - 4 hrs.
1000.0	-	Death occurs between	2 - 4 hrs.
1200.0	-	Death occurs between	1 - 4 hrs.
1400.0	-	Death occurs between	1 - 4 hrs.
2000.0	-	Death occurs between	1 - 2 hrs.

③ Selby
Dr. M. S. M. M.
PESTICIDE
CALCULUS

Fig. 1. Log-Probit graph illustrating calculated LD_{50} values for male chicken following exposure to some Technical.

$$LD_{50} = 1000.0 \pm 124.67 \text{ mg/kg}$$





Dr. Mrs. R. Sengupta
 Director of Research
 INSTITUTION OF RESEARCH LABORATORIES
 CALCUTTA.

© B. L. D.

Fig. 3. Log-front graph illustrating calculated LD₅₀ values for Pigeon following exposure to Ozone Technical

$$\log x = 4.970 \pm 8.67 \text{ mg/kg}$$

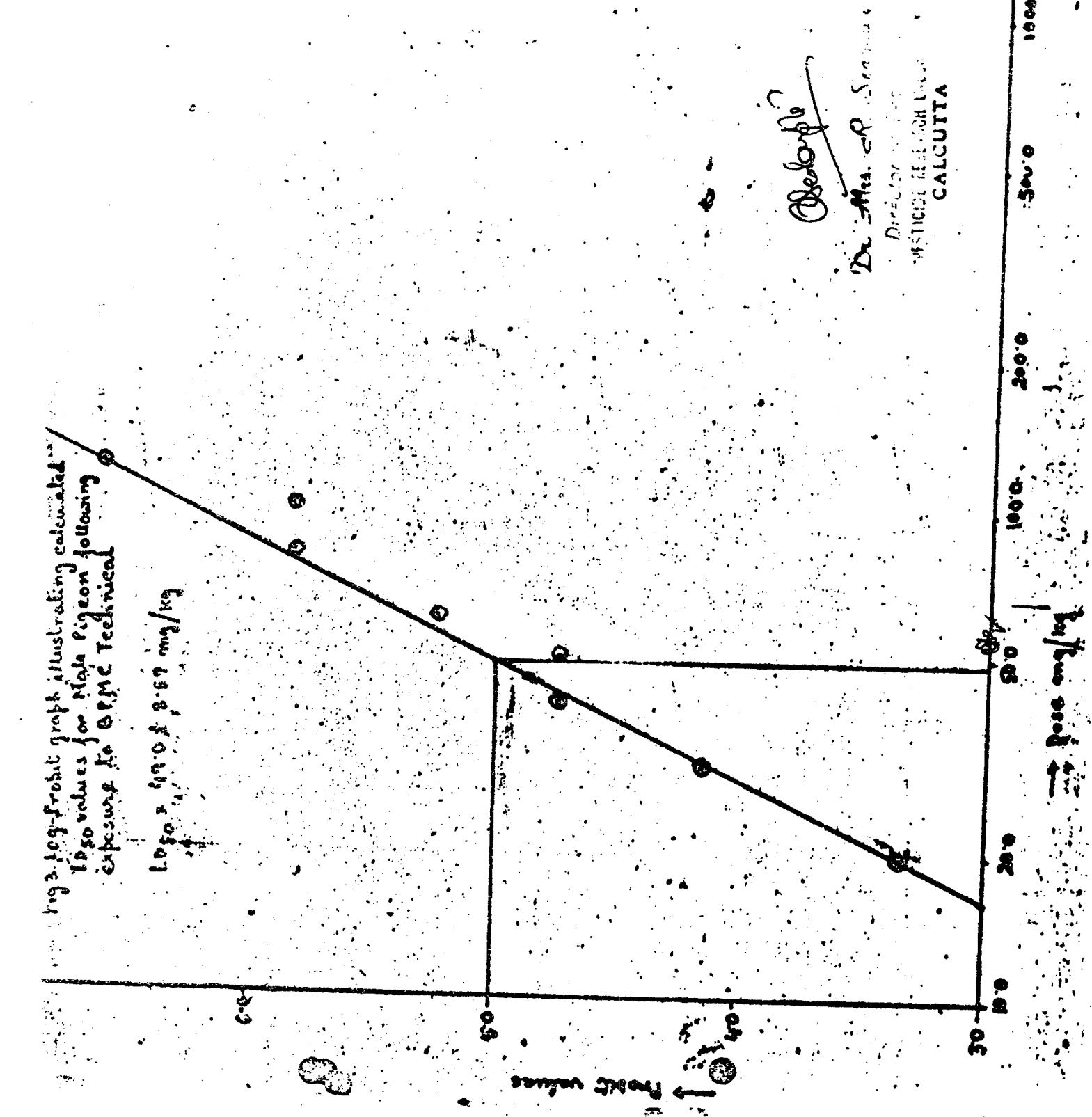
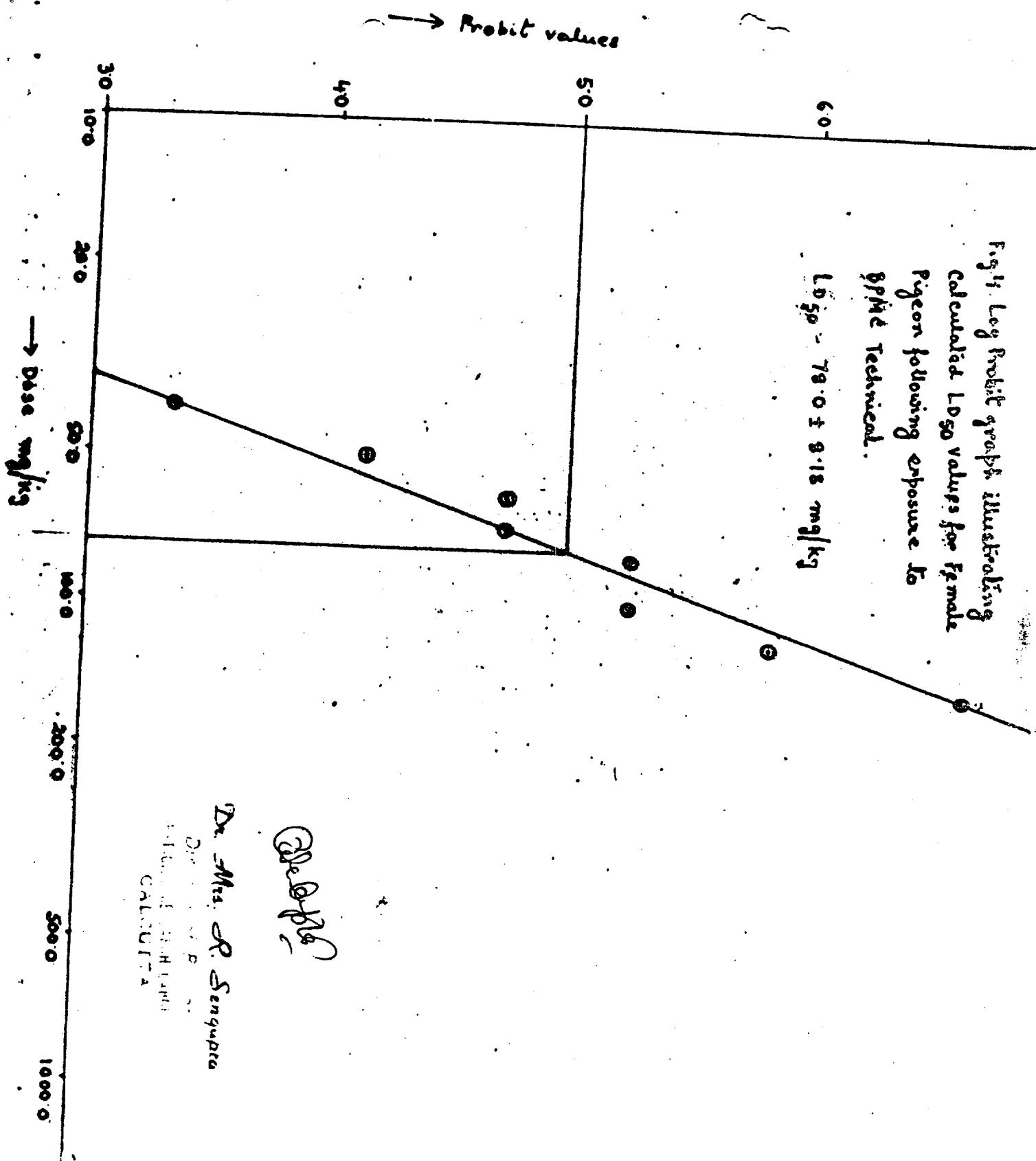


Fig. 4. Log Probit graph illustrating
calculated LD₅₀ values for female
pigeon following exposure to
SPME Technical.

$$LD_{50} = 78.0 \pm 8.18 \text{ mg/kg}$$



Triage of 8(e) Submissions

MAR 19 1986

Date sent to triage: _____

NON-CAP

CAP

Submission number: 12114A

TSCA Inventory:

Y N D

Study type (circle appropriate):

Group 1 - Dick Clements (1 copy total)

ECO

AQUATO

Group 2 - Ernie Falke (1 copy total)

ATOX

SBTOX

SEN

w/NEUR

Group 3 - Elizabeth Margosches (1 copy each)

STOX

CTOX

EPI

RTOX

GTOX

STOX/ONCO

CTOX/ONCO

IMMUNO

CYTO

NEUR

Other (FATE, EXPO, MET, etc.): _____

Notes:

THIS IS THE ORIGINAL 8(e) SUBMISSION; PLEASE REFILE AFTER TRIAGE DATABASE ENTRY

*No comments found.
Please evaluate.*

For Contractor Use Only

entire document: 0 1 2 pages 1,2

pages _____

Notes:

Contractor reviewer: JW

Date: 1/17/96

CICCATS TRIAGE TRACKING DBASE ENTRY FORM

CICCATS DATA
Submission # 8EHQ-0992 - 12/14 SEQ. A

TYPE: INT SUPP FLWP

SUBMITTER NAME: Union Carbide Chemicals
and Plastics Company, Inc.

INFORMATION REQUESTED: FLWP DATE:

- 0501 NO INFO REQUESTED
- 0502 INFO REQUESTED (TECH)
- 0503 INFO REQUESTED (VOL ACTIONS)
- 0504 INFO REQUESTED (REPORTING RATIONALE)
- DISPOSITION:
 - (650) REFER TO CHEMICAL SCREENING
 - (678) CAP NOTICE

SUB. DATE: 08/28/92 OTS DATE: 09/01/92 CSRAD DATE: 02/15/95

CHEMICAL NAME:

CAS# 3766-81-2

VOLUNTARY ACTIONS:

- (641) NO ACTION REQUESTED
- 0402 STUDIES PLANNED/INITIATED
- 0403 NOTIFICATION ON WORKER CONTACT
- 0404 LABORATORY CHANGES
- 0405 PROCESS/HANDLING CHANGES
- 0406 APP/USE DISCONTINUED
- 0407 PRODUCTION DISCONTINUED
- 0408 CONFIDENTIAL

P.F.C.

INFORMATION TYPE:

P.F.C.	INFORMATION TYPE	P.F.C.	INFORMATION TYPE
0201	ONCO (HUMAN)	0216	EPIC/CLIN
0202	ONCO (ANIMAL)	0217	HUMAN EXPOS (PROD CONTAM)
0203	CELL TRANS (IN VITRO)	0218	HUMAN EXPOS (ACCIDENTAL)
0204	MUTA (IN VITRO)	0219	HUMAN EXPOS (MONITORING)
0205	MUTA (IN VIVO)	0220	ECO/AQUA TOX
0206	REPRO/ERATO (HUMAN)	0221	ENV. OCCUREL/FATE
0207	REPRO/ERATO (ANIMAL)	0222	EMER. INCI OF ENV CONTAM
0208	NEURO (HUMAN)	0223	RESPONSE REQUEST DELAY
0209	NEURO (ANIMAL)	0224	PROD/COMP/CHM ID
0210	ACUTE TOX. (HUMAN)	0225	REPORTING RATIONALE
0211	CHR. TOX. (HUMAN)	0226	CONFIDENTIAL
0212	ACUTE TOX. (ANIMAL)	0227	ALLERG (HUMAN)
0213	SUB ACUTE TOX (ANIMAL)	0228	ALLERG (ANIMAL)
0214	SUB CHRONIC TOX (ANIMAL)	0229	METAB/PHARMACO (ANIMAL)
0215	CHRONIC TOX (ANIMAL)	0240	METAB/PHARMACO (HUMAN)

TRIAGE DATA

ONGOING REVIEW

SPECIES

✓ CK
Pigeon

TOXICOLOGICAL CONCERN:

LOW
MED
HIGH

PRODUCTION:

pesticide

YES (DROP/REFER)

NO (CONTINUE)

REF/R

IN TREATMENT

DISPOSITION:

ENTRY FORM

CAPNUM 12144	LTR a	DATE 0992	CBI	CASNO 3766812	CONCERN HIGH	AI 97.5	SOLUBILITY NS
-----------------	----------	--------------	-----	------------------	-----------------	------------	------------------

CHEMNAME

BPMC Technical
2'-butyl phenyl-N-methyl carbamate

ORGANISM Pigeon, male	DURATION 21d	ENDPOINT LD50	CODE	TOXVALUE 47.8	UNITS mg/kg	MELTINGPT NS
--------------------------	-----------------	------------------	------	------------------	----------------	-----------------

COMMENTS

female LD50=76.8mg/kg